Operating Instructions

Y-Adapter mini CLIX

> 8592/.

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2 General Information

2.1 Manufacturer

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2.2 Information Regarding the Operating Instructions

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We reserve the right to make technical changes without notice.

2.3 Symbols used

▶	A call to take action: Describes the actions which the user should undertake.
▷	Reaction sign: Describes the results or the reactions to the actions taken.
✗	Checklist sign
☞	Commentary sign: Describes the notes and recommendations.
	Warning sign: Danger from energised parts!
	Warning sign: Danger due to an explosive atmosphere!

3 General Safety Information

3.1 Safety Instructions for Assembly and Operating Personnel

The operating instructions contain basic safety instructions which are to be observed during installation, operation and maintenance and servicing. Non-observance can lead to persons, plant and the environment being endangered.

⚠ WARNING
Risk due to unauthorised work being performed on the device! ▷ There is a risk of injury and damage to equipment. ▶ Mounting, installation, commissioning and servicing work must only be performed by personnel who are both authorised and suitably trained for this purpose.

⚠ WARNING	
	Danger due to dust deposits! ▷ There is a risk of injury and damage to equipment. ▷ Explosion protection is not guaranteed any longer. ▶ A device with a dust layer exceeding 50 mm as stipulated in EN 50281-1-2 must not be operated.

Before connection/operating:

- ▶ Read through the operating instructions.
- ▶ Give adequate training to the assembly and operating personnel.
- ▶ Ensure that the contents of the operating instructions are fully understood by the personnel in charge.
- ▶ The national installation and assembly regulations (e.g. IEC/EN 60079-14) apply.

When operating the device:

- ▶ The device may only be plugged in or out when subjected to a load of less than a maximum of 250 V AC and 9.0 A rated current.
- ▶ Ensure the operating instructions are made available on location at all times.
- ▶ Observe safety instructions.
- ▶ Observe national safety and accident prevention regulations.
- ▶ Only operate the device in accordance with its performance data.
- ▶ The electrical connection of the devices must only be performed by qualified personnel.
- ▶ Make sure the power supply is disconnected before opening the device.
- ▶ Maintenance work and repairs may only be performed using original replacement parts supplied by the manufacturer.
- ▶ Repairs that may affect the explosion protection are only to be performed by R. STAHL personnel or a qualified electrician in accordance with relevant national regulations.
- ▶ Servicing/maintenance work or repairs which are not described in the operating instructions must not be performed without prior agreement with the manufacturer.
- ▶ Any damage may render explosion protection null and void.
- ▶ The device may only be fitted and used if it is in an undamaged, dry and clean state.
- ▶ The device may only be operated with the associated undamaged connector plugs and sockets.

- ▶ After disconnection, the enrgised plug and socket connection components must be immediately closed off using the protective caps. When replacing the cap, make sure that it covers the connector correctly, otherwise the minimum protection level and the explosion protection cannot be guaranteed.
- ▶ When screwing the components together, check the seal ring for correct positioning and intactnees.
- ▶ The quality of the connection cable must be chosen, such that it meets the thermal and mechanical requirements in the area of application.

If you have questions:

- ▶ Contact the manufacturer.

3.2 Warning Information

Warnings are sub-divided in these operating instructions according to the following scheme:

⚠ WARNING
The type and source of the danger! ▷ Possible consequences. ▶ Measures for avoiding the danger.

They are always identified by the signalling word “WARNING“ and sometimes also have a symbol which is specific to the danger involved.

3.3 Conformity to Standards

The Y-Adapter complies with the following standards and directives:

- ✗ Directive 94/9/EC
- ✗ DIN EN 60079-0, DIN EN 60079-1, DIN EN 60079-7 and EN 50281-1-2 (comparable international standards: IEC 79-0, IEC 79-1, IEC 79-11)

4 Designated Use

The Y-Adapter is approved for use in hazardous area Zones 1 and 2 as well as Zones 21 and 22. Use in Zone 0 or Zone 20 is not permitted.

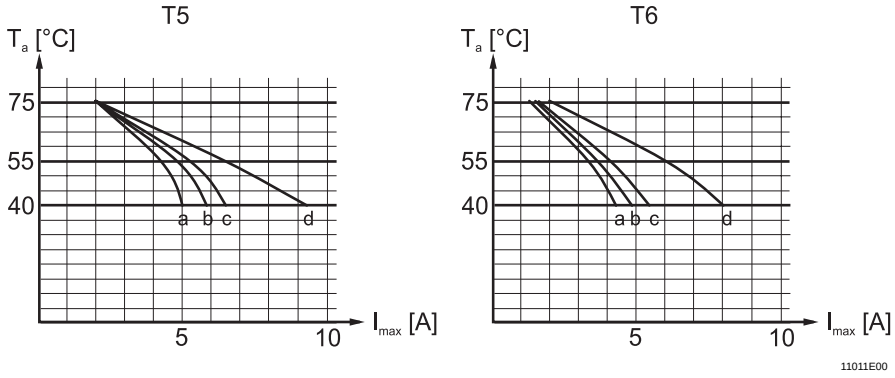
The Y-Adapter is used to supply current to movable on-site controllers and electrical systems as well as to movables machines and drives in hazardous areas.

It is used as a quick-action connector of explosion-protected electrical apparatus in intrinsically safe (Ex) and industrial areas.

⚠ WARNING
Only use the device for its intended purpose! ▷ Otherwise, the manufacturer’s liability and warranty expire. ▶ Only use the device under the operating conditions described in the operating instructions. ▶ The device must only be used in areas subject to explosion hazards according to these operating instructions.

5 Technical Data

Explosion protection	
Gas explosion protection	⟨Ex⟩ II 2 G Ex de IIC T6 / T5
Gas explosion protection (IECEx)	Ex de IIC T6 resp. T5
Dust explosion protection	⟨Ex⟩ II 2 D IP 66 T80 °C / T95 °C
Dust explosion protection (IECEx)	Ex tD A21 IP66 T 80 °C resp. T 95 °C
Certificates	
Certificates	PTB 05 ATEX 1071
IECEx certification	IECEx PTB 06.0094
Rated values	
AC voltage	250 V
AC current	9.0 A
Frequency	50 / 60 Hz
DC voltage	60 V
DC current	2.5 A
	Rated values depend on ambient temperatures and the connection cross-section



on connection cross-section

a: 0.5 mm^2 b: 0.75 mm^2 c: 1.0 mm^2 d: 1.5 mm^2

Enclosure material	Connection chamber: polyamide (miniCLIX 8591: polyamide; brass, nickel-plated; stainless steel AISI 316L)
Connectors	Spring clamp connection 0.34 mm^2 ... 1.5 mm^2 (flexible or solid)
Cable entries	8592/...-..-...1 Ø 4 mm ... 7.5 mm 8592/...-..-...2 Ø 7.5 mm ... 11 mm
Ingress Protection	IP 66 / IP 68 (2 m water column, 1 hour) acc. to EN 60529 (with protective caps closed and secured as well as properly fitted and secured components)
Safety class	II - fulfilled by plastic versions acc. to EN 60598
Ambient temperature	see figure “Rated values“
Storage temperature	- 55 °C ... + 80 °C (in original packaging)

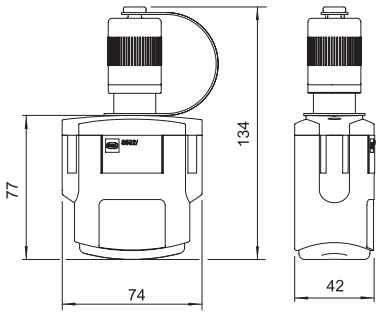
Test torque

Stopping plug screws	1.5 Nm
pressure fitting with strain relief	2.5 Nm
protective cap	2.5 Nm
union nut	2.5 Nm

Weight

		Plastic	Metal
Plug	8592/.1.-..-....	approx 0.168 kg	approx 0.268 kg
Socket	8592/.2.-..-....	approx 0.164 kg	approx 0.255 kg

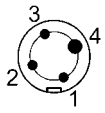
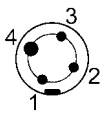
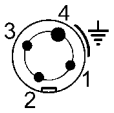
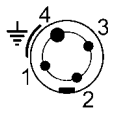
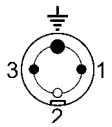
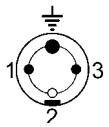
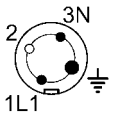
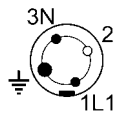
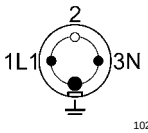
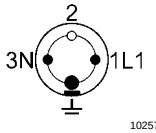
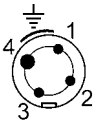
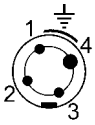
Dimension drawings (all dimensions in mm) - subject to alterations

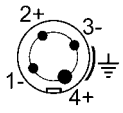
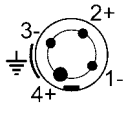
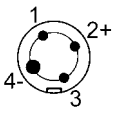
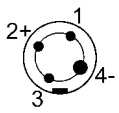


11004

8592/...-..-.... Y-Adapter

Proposed coding of connectors
Turn down nose/notch (6 h)
All other codings result out of this position

Voltage	Number of pins	Coding	Couper / Flange socket	Plug / Device plug	Proposed colour coding
Bus	4 P	2 h	 10905E00	 10906E00	green
Bus + Shield	4 P + ⏚*	1 h	 10903E00	 10904E00	without
24 V AC	2 P + ⏚	12 h	 10237E00	 10259E00	without
110 V ... 130 V AC	2 P + ⏚	4 h	 10234E00	 10256E00	yellow
230 V ... 250 V AC	2 P + ⏚	6 h	 10235E00	 10257E00	red
	4 P + ⏚*	10 h	 10236E00	 10258E00	blue

24 V DC	4 P + ⏚*	5 h	 06452E00	 06474E00	green / red
	4 P	8 h	 10238E00	 10260E00	grey

* with PE bracket

All pins/sockets are fitted in the factory, independent of coding.

6 Transport, Storage and Disposal

Transport

▶ Shock-free in its original carton, do not drop, handle carefully.

Storage

▶ Store in a dry place in its original packaging.
▶ Permissible storage temperature in the original packaging: - 55 °C ... + 80 °C
▶ Store Y-adapter with the protective cap closed.

Disposal

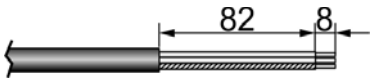
▶ Ensure environmentally friendly disposal of all components according to legal regulations.

7 Assembly

7.1 Tools required

✗ Torx screwdriver - size 10
✗ Slotted screwdriver 2.5 x 75
✗ Cable stripping tool

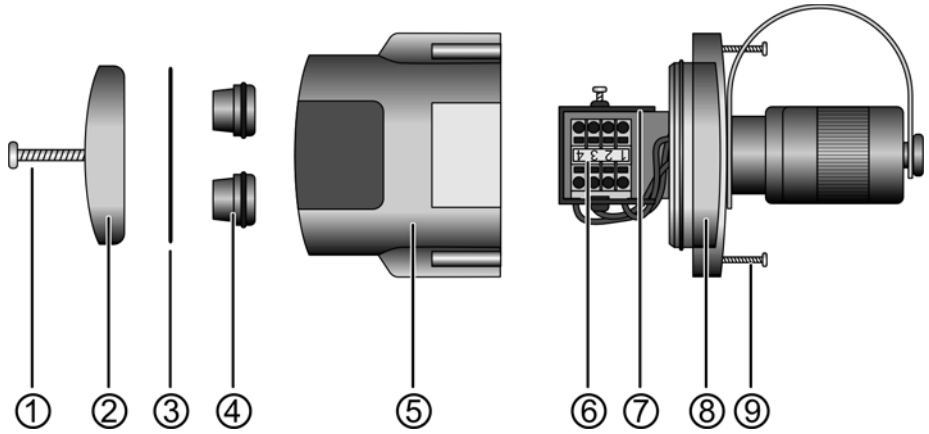
7.2 Removing wire insulation



11012E00

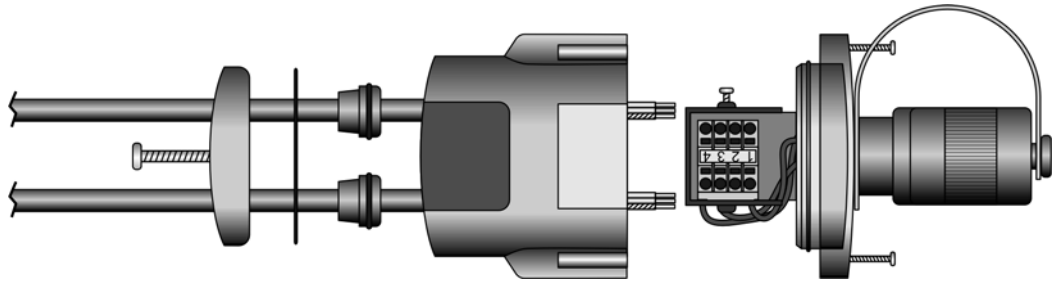
▶ Remove the wire insultant as shown in the graphic.
▶ In so doing, the conductor itself must not be damaged (e.g. notched).

7.3 Assembly



11013E00

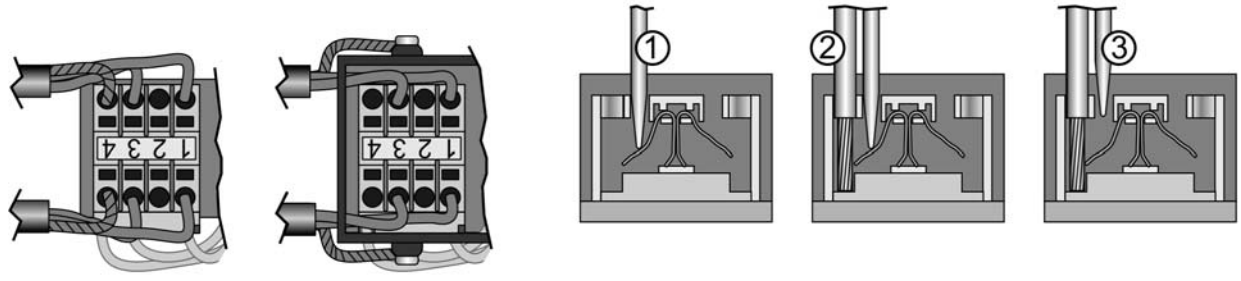
▶ Seperate the Y-adapter into its individual components: captive screw M4 (1), pressure fitting (2), seal (3), strain relief (4), enclosure (5), and sealing cap (8) with captive stopping plug screw (9). The terminal block (6) and optional shielding plate (7) are firmly connected to the sealing cap (8) and must not be seperated.



11014E00

▶ Insert the stripped wires through the pressure washer, the seal, the strain relief and enclosure into the terminal block.

⚠ WARNING
Unauthorised alterations the terminal block! ▷ Risk of the most severe injuries occurring. ▶ Nothing may be dismantled or modified on the terminal block.



11045E00

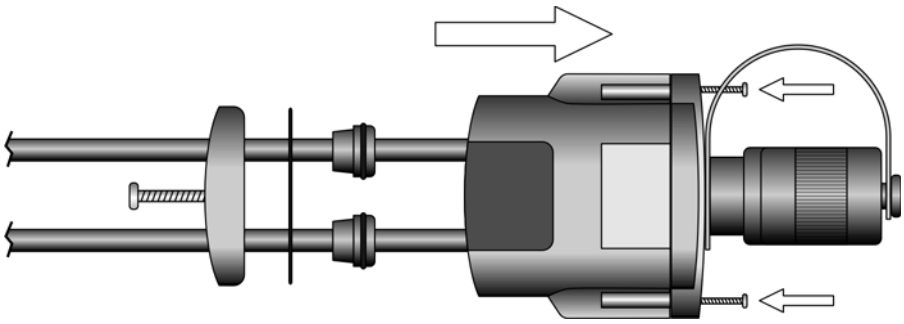
▶ Connect wires according to their numbering on the terminal block and to the shielding plate if necessary (PE lead on 4, or to the shielding plate if necessary).

Connection to the shielding plate:

- Secure clamp wires under the clamping screws.

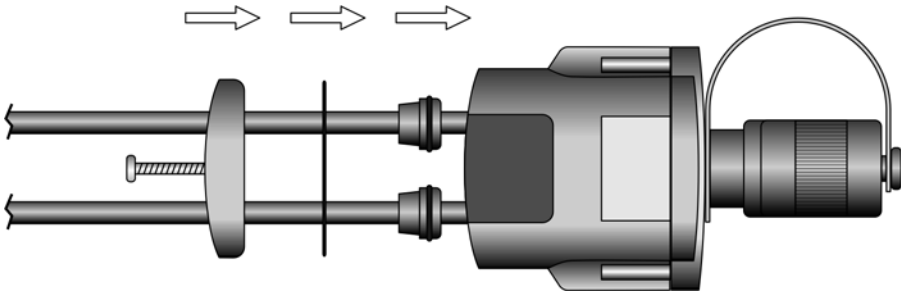
Connection to the terminal block:

- Unlock the spring clamp using a screwdriver (1) (2.5 x 75).
- Insert lead (2) in the corresponding terminal.
- Carefully pull the screwdriver out from the terminal block (3).



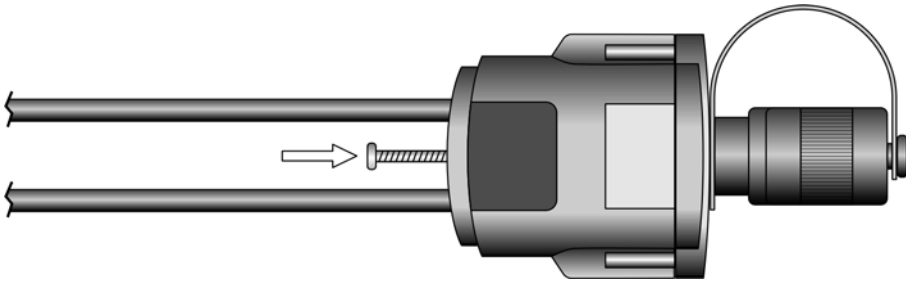
11016E00

- Plug the enclosure and sealing cap together.
- Secure the sealing cap with both stopping plug screws (test torques: see technical data).



11017E00

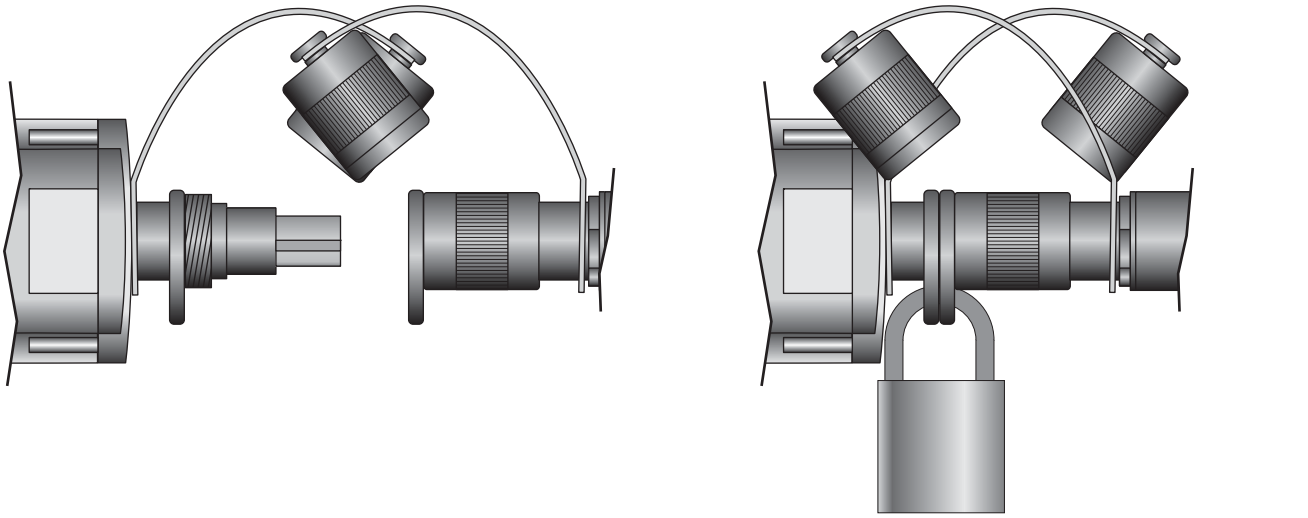
- Push the strain relief, seal and pressure fitting along the cable and into the enclosure.



11018E00

- Firmly attach the pressure fitting to the enclosure with the screw (test torques: see technical data).

7.4 Locking mechanism



11044E00

The Y-adapter can be ordered with an optional locking mechanism. It can then be padlock-safeguarded when plugged in (hasp diameter: 3 ... 6 mm).

☞	The union nut must be unscrewed before the connection can be separated.

☞	The locking mechanism can not be retrofitted.

8 Commissioning

Before commissioning, make sure that:

- ✗ the checks and tests as stipulated by national regulations were conducted,
- ✗ the correct operation and installation in accordance with the operating instructions and other applicable specifications was checked,
- ✗ damage is checked for each and every time before plug is inserted into a plug/coupler,
- ✗ the same earth potential is present troughout the system when plugging the connectors together.

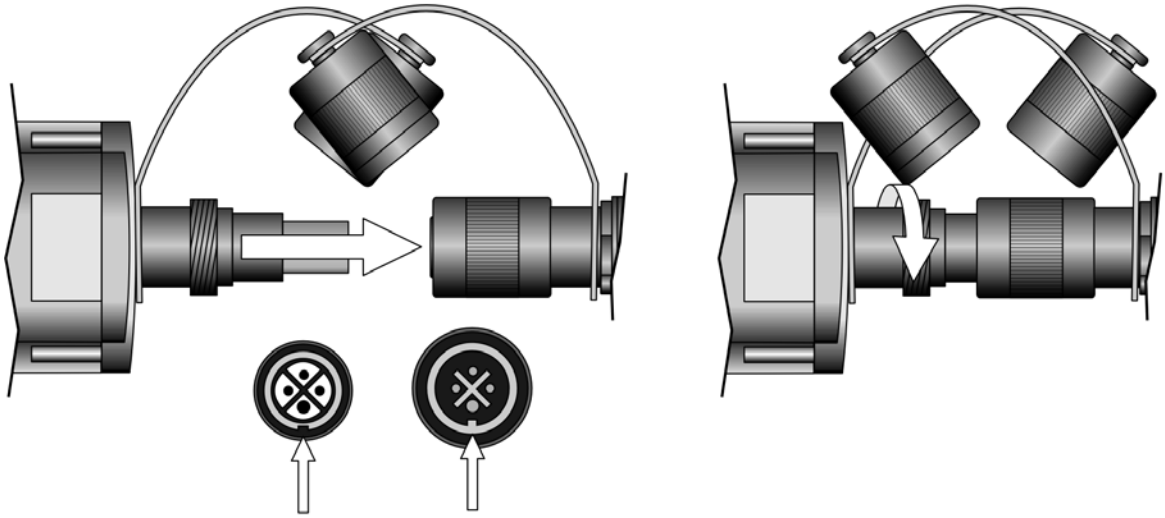
⚠ WARNING
Risk of damage to plug or socket! Components must be identically coded.

⚠ WARNING	
	Incorrectly connected plug and socket! ▷ Explosion protection cannot be guaranteed any more if the plug and socket are incorrectly connected. ▶ Proceed in strict accordance with the instructions.

Connecting / disconnecting the plug connection:

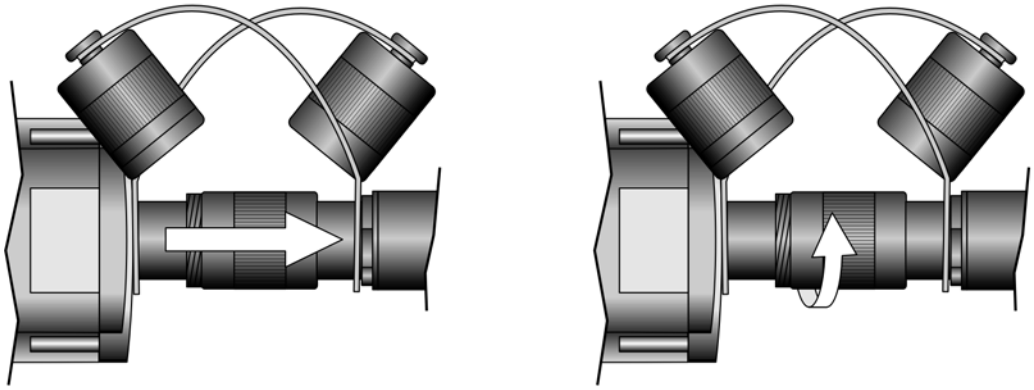
☞	After disconnection, the energised plug and socket connection components must be immediately closed off using the protective caps!

▶ Check the plug for damage.



11046E00

▶ Insert the Y-adapter up to the first end-stop in the device plug.
When doing this, make sure the guide nose is oriented correctly.
▶ Rotate the Y-adapter by about 30° to the right until you reach the stop.



11043E00

▶ Fully insert the plug into the socket.
▶ Screw on the coupling ring/union nut (test torques: see technical data).
▷ The mechanical connection as well as the IP protection are now established.

▶ Disconnection of the plug connection proceeds by reversing the order.

9 Maintenance and Servicing

⚠WARNING	
	Danger from energised parts! ▷ Risk of the most severe injuries occuring. ▶ All connections and wiring must be disconnected from the power supply. ▶ Secure the connections against unauthorised activation.

⚠WARNING	
	Short circuit in the circuit ▷ After multiple short circuits, the flameproof encapsulation is no longer guaranteed. ▶ After a short circuit, check the functionality of the device. ▶ Replace the entire device if needed.

9.1 Regular Maintenance Work

- ▶ Consult the relevant regulations (e.g. IEC/EN 60079-17) to determine the type and extent of inspections.
- ▶ Plan the intervals so that any defects in the equipment which may be anticipated are promptly detected.

To check as part of the servicing/maintenance schedule:

- ✗ Check that cables and lines are clamped properly.
- ✗ Inspect device for visible damage.
- ✗ Compliance with the permitted temperatures in accordance with EN 60079-0.
- ✗ Make sure the function is in accordance with regulations.

9.2 Repair work

- ▶ Repairs that may affect the explosion protection are only to be performed by the manufacturer.
- ▶ No changes to the apparatus are permitted.
- ▶ Maintenance work and repairs may only be performed using original replacement parts supplied by the manufacturer.

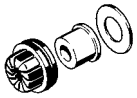
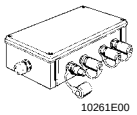
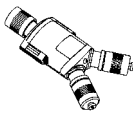
In case of damage to the plug pins:

- ▶ Replace the apparatus. Disassembly cannot be performed, therefore repair is not possible.

9.3 Cleaning

- ✗ Clean with a cloth, brush, vacuum cleaner or similar items.
- ✗ When cleaning with a damp cloth use water or mild, non-abrasive, non-scratching cleaning agents.
- ✗ Never use aggressive cleaning agents or solvents.

10 Accessories and Spare Parts

Designation	Illustration	Description	Ordering Code
Protective cap for coupler, flange socket	10211E00	plastic (polyamide resin)	4646180
		brass, nickel-plated	4646160
Protective cap for plug, device plug	10210E00	plastic (polyamide resin)	4646190
		brass, nickel-plated	4646170
Strain relief	 10892E00	with gasket and plate ∅ 4 mm ... 7.5 mm	8591802290
		with gasket and plate ∅ 7.5 mm ... 11 mm	8591803290
Distribution box	 10261E00	with 1, 2, 4 or 6 branches (flange socket: plastic or metal) in plastic or metal	
Y-Adapter with connectors	 10912E00	for looping of data, signal or power lines; all connections plugable	

11 Type Examination Certificate (Page 1)

Physikalisch-Technische Bundesanstalt

Braunschweig und Berlin

(1) **EC-TYPE-EXAMINATION CERTIFICATE**

(Translation)

(2) Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres - **Directive 94/9/EC**

(3) EC-type-examination Certificate Number:

PTB 05 ATEX 1071

(4) Equipment: Y-shape distribution box, type 8592/...-..-.... and Y-shape distribution element, type 8593/.-.....-..

(5) Manufacturer: R.STAHL Schaltgeräte GmbH

(6) Address: Am Bahnhof 30, 74638 Waldenburg, Germany

(7) This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The Physikalisch-Technische Bundesanstalt, notified body No. 0102 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres, given in Annex II to the Directive.

The examination and test results are recorded in the confidential report PTB Ex 05-15174.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2004 **EN 60079-7:2003** **EN 50281-1-1:1998**

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-type-examination Certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:

II 2 G Ex de IIC T6 or T5
II 2 D IP 66 T 80 °C or T 95 °C

Zertifizierungsstelle Explosionsschutz Braunschweig,
By order:

Dr.-Ing. U. Klausmeyer
Direktor und Professor

sheet 1/2

EC-type-examination Certificates without signature and official stamp shall not be valid. The certificates may be circulated only without alteration. Extracts or alterations are subject to approval by the Physikalisch-Technische Bundesanstalt.
In case of dispute, the German text shall prevail.

Physikalisch-Technische Bundesanstalt • Bundesallee 100 • D-38116 Braunschweig

12 Declaration of Conformity

EG-Konformitätserklärung
EC-Declaration Of Conformity
CE-Déclaration De Conformité

PTB 05 ATEX 1071

Wir (we; nous)

R. STAHL Schaltgeräte GmbH, Am Bahnhof 30, D-74638 Waldenburg (Württ.)

erklären in alleiniger Verantwortung, daß das Produkt	**Y-Verteilerdose Typ 8592/...-..-....**
hereby declare in our sole responsibility, that the product	Y-distribution box Type 8592/...-..-....
déclarons de notre seule responsabilité, que le produit	Boîtier de distribution Y Type 8592/...-..-....

auf das sich diese Erklärung bezieht, mit der/den folgenden Norm(en) oder normativen Dokumenten übereinstimmt
which is the subject of this declaration, is in conformity with the following standard(s) or normative documents
auquel cette déclaration se rapporte, est conforme aux norme (s) ou aux documents normatifs suivants

Bestimmungen der Richtlinie terms of the directive prescription de la directive	**Titel und/oder Nr. sowie Ausgabedatum der Norm** title and/or No. and date of issue of the standard titre et/ou No. ainsi que date d'émission des normes
94/9/EG: Geräte und Schutzsysteme zur bestimmungsgemäßen Verwendung in explosionsgefährdeten Bereichen 94/9/EC: Equipment and protective systems intended for use in potentially explosive atmospheres 94/9/CE: Appareils et systèmes de protection destinés á être utilisés en atmosphères explosibles	EN 60079-0: 2004 EN 60079-7: 2003 EN 50281-1-1:1998
89/336/EWG: Elektromagnetische Verträglichkeit 89/336/EEC: Electromagnetic compatibility 89/336/CEE: Compatibilité électromagnétique	EN 60529:1991

Waldenburg, 15. Dez. 2005	i.V.	i.V.
Ort und Datum Place and date Lieu et date	**B. Limbacher** **Leiter Entwicklung** Head of Development Directeur Développement	**Dr. S. Jung** **Leiter Qualitätsmanagement** Head of quality management dept. Chef du dept. assurance de qualité

TÜV 03/98 Papier chlorfrei

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